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Product Information

PAD4, GST-tagged, human recombinant, expressed in *Sf*9 cells

Catalog Number **SRP5226**
Storage Temperature –70 °C

Synonyms: PADI4, PAD, PDI4, PDI5

Product Description

PAD4 is a member of the peptidyl arginine deiminase family of enzymes, which catalyze the post-translational deimination of proteins by converting arginine residues into citrullines in the presence of calcium ions.[1] PAD4 is essential for antibacterial innate immunity mediated by neutrophil extracellular traps (NETs).[2] PAD4 plays a role in granulocyte and macrophage development leading to inflammation and immune response. PAD4 also mediates gene expression by regulating arginine methylation and citrullination in histones.[3]

Recombinant, full-length, human PAD4 was expressed by baculovirus in *Sf*9 insect cells using an N-terminal GST tag. The gene accession number is BC025718. Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, and 25% glycerol.

Molecular mass: ~96 kDa

Purity: 70–95% (SDS-PAGE, see Figure 1)

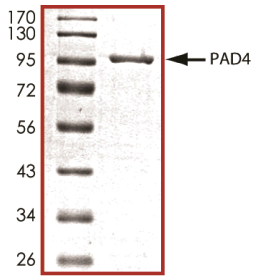
Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at –70 °C is recommended. After opening, aliquot into smaller quantities and store at –70 °C. Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot
70–95% (densitometry)



References

1. Nakashima, K. et. al., Molecular characterization of peptidylarginine deiminase in HL-60 cells induced by retinoic acid and 1-alpha,25-dihydroxyvitamin D(3). J. Biol. Chem., **274**, 27786-27792 (1999).
2. Li, P. et. al., PAD4 is essential for antibacterial innate immunity mediated by neutrophil extracellular traps. J. Exp. Med., **207**, 1853-1862 (2010).
3. Wang, Y. et. al., Human PAD4 regulates histone arginine methylation levels via demethylimination. Science, **306**, 279-283 (2004).

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